



CDPH UPDATE 2015

Routine Vaccine Management: *Temperature Monitoring, Handling and Documentation Best Practices*

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Disclosure

The use of trade names and commercial sources is for identification only, and does not imply endorsement by the Centers for Disease Control and Prevention (CDC) or the California Vaccines for Children (VFC) Program. Photographs from non-federal organizations are provided solely as a service to our users. These photographs do not constitute an endorsement of these organizations by CDC or the federal government and none should be inferred.

Objectives

By the end of this presentation, you should be able to:

1. Identify proper storage units
2. Define acceptable temperature ranges
3. Explain how to record temperatures
4. Discuss types of thermometers
5. Explain what “calibration” means

Vaccine Storage and Handling





Safeguarding Vaccines,
Vaccine Emergencies and
Reporting Out-of Range
Temperatures

What is a “Vaccine Emergency”

Any of these situations can affect the temperature of the vaccine:

- Power Outage
- Appliance malfunction
- Weather conditions
- Accidental unplugging of the unit



Required Vaccine Storage Temperatures

REFRIGERATOR

35° - 46° F
(2° - 8° C)

FREEZER

*Varicella, MMR, MMRV,
Zostavax*

+ 5° F (-15° C) or
colder

Effect of temperature on vaccines

INACTIVATED VACCINES AND TOXOIDS

- o Too cold (below 35°)
 - o Immediate structural damage, regardless of the exposure time
- o Too warm (above 46°F)
 - o Damage is gradual, but cumulative exposure affects vaccine stability



Same price as the 2013 Lexus CT200

803 vaccine doses
15cu ft. refrigerator
\$32,000. worth of vaccine

VFC's Storage and Handling Requirements

- Effective July 1, 2009, all enrolled VFC providers will be expected to comply with the new requirements. All newly enrolled providers or providers who experience any vaccine loss due to failure of their current storage unit (regardless of volume) will be expected to comply with the new requirement effective September 1, 2008.

<u>Office Size</u>	<u>Required Equipment</u>
Very High Volume 10,000 doses/year	Pharmacy-grade refrigerator-only units and stand-alone freezer units
High Volume 2,000-10,000 doses/year	Refrigerator-only (16.7 cubic feet minimum) and stand-alone freezer units
Medium Volume 500-2,000 doses/year	Refrigerator-only (16.7 cubic feet minimum) and stand-alone freezer units
Low Volume Less than 500 doses/year	OR Pharmacy-grade under the counter units.



Best practices for vaccine storage

- ✓ Use the correct storage units
- ✓ Keep refrigerator temperatures between 35°F to 46°F. Aim for 40° F
- ✓ Keep freezer temperatures at 5°F or below.
- ✓ Place thermometer probe towards the center of the vaccine storage unit
- ✓ Separate the VFC vaccine supply from privately purchased vaccine.
- ✓ Group vaccines by pediatric, adolescent, and adult types.
- ✓ Keep vaccines in their original boxes until you are ready to use them. Some vaccines are sensitive to light (HPV, MMR, MMRV, rotavirus, varicella, and zoster vaccines)
- ✓ Keep vaccines with shorter expiration dates to front of shelf.
- ✓ Transfer short-dated vaccine
 - ✓ If you have vaccine that will expire in 3-6 months, contact other VFC Providers to see if they can use the vaccine prior to the expiration date. Or call your VFC Rep.

Vaccine Refrigerator Setup

Storing
Vaccines



Carefully organizing vaccines in a refrigerator helps protect vaccine and facilitates vaccine inventory management. Refrigerate all vaccines except MMR, MMRV, Varicella, and Zoster.

Refrigerator-only Unit

Almost all of the space is usable (inside dashed lines).

✓ Always keep vaccine in its original box. Do not open the box until you are ready to use the vaccine.

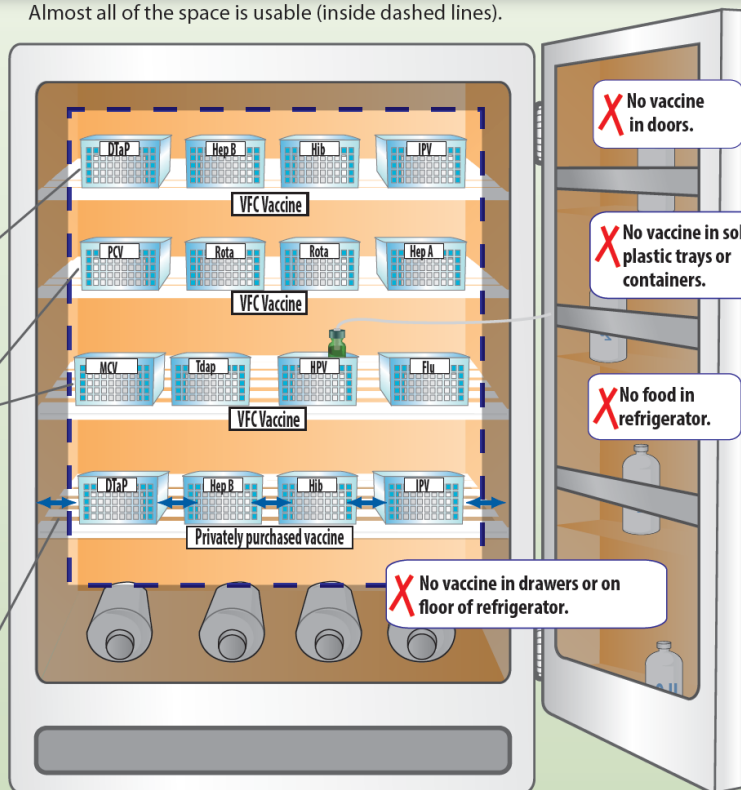
✓ Place vaccine boxes in breathable plastic mesh baskets or directly on shelves. Label baskets or shelves by type of vaccine.

✓ Group vaccines by pediatric, adolescent, and adult types.

✓ Separate VFC vaccine from privately purchased vaccine and label them clearly.

✓ Keep baskets 2-3 inches from walls and other baskets.

✓ Store only vaccine and other medication in vaccine storage units.



✓ Keep vaccines with shorter expiration dates to front of shelf.

If you have vaccine that will expire in 3 months or less that you will not be able to use, notify the VFC Program.



✓ Keep temperatures between 35°F to 46°F.

Below 35°F is too cold! Call VFC.

Above 46°F is too warm! Call VFC.

What NOT to do...

- × No vaccine in doors, along walls
- × No vaccine in drawers or on floor of refrigerator
- × No vaccine in solid plastic trays or containers
- × No food or lab specimens in refrigerator
- × Never plug into outlet controlled by wall switch

DO NOT IGNORE OUT OF RANGE TEMPERATURES

What's wrong with this picture?



What's wrong with this picture?

Everything!

- Dormitory-style unit
- Ice in freezer unit
- Too much vaccine for size
- Soda in the door
- Lab specimen in the fridge
- Vaccine on top shelf probably frozen







Temperature
Monitoring,
Equipment, and
Equipment
Maintenance
(Calibration)

Thermometers

- Thermometers are an essential component of vaccine management. They help make sure vaccines administered to patients have been appropriately stored within manufacturer's recommended ranges.
- Every unit storing vaccines must have a thermometer that meets the following specifications: but one that is accurate, provides minimum and maximum temperatures reached over a period of time, and it is well-maintained (calibrated annually).



Thermometers & VFC

- o VFC providers must have VFC-compliant thermometers in the practice's vaccine storage units at all times.
 - o A primary thermometer must be centrally located in each vaccine storage unit in proximity with vaccines.
 - o A minimum of one back-up thermometer, located in an easily accessible practice area, must be available for use when primary thermometers are being calibrated or fails.

Practices with multiple vaccine storage units may need more than one back-up thermometer.



Thermometer Specifications

Display current, minimum and maximum temperatures.

External digital display to monitor temperatures without opening unit

Have an alarm

Have a min / max reset button

Be within $\pm 0.5^{\circ}\text{C}$ ($\pm 1^{\circ}\text{F}$) accuracy.

biosafe glycol-encased probe (or similar buffered solution).



Unacceptable Thermometers



Fluid-filled biosafe liquid



bi-metal stem



food



household mercury



Chart recorders

-difficult to read

-failure to change the chart paper will result in unusable temperature data.

- have significant limitations in temperature monitoring
- can be difficult to read and only indicate the temperature at the precise time they are read
- temperature fluctuations outside the recommended range are not detected.

Probes are available in two forms: a standard probe that will measure air temperature and a biosafe glycol-encased probe that will measure liquid temperature.

Standard probes that measure air can be easily affected by short fluctuations in air temperature in the unit such as cycling and frequent opening and closing of the unit doors during busy workdays.

Glycol-encased probes can provide a more accurate reading of actual vaccine temperature and are therefore recommended by CDC



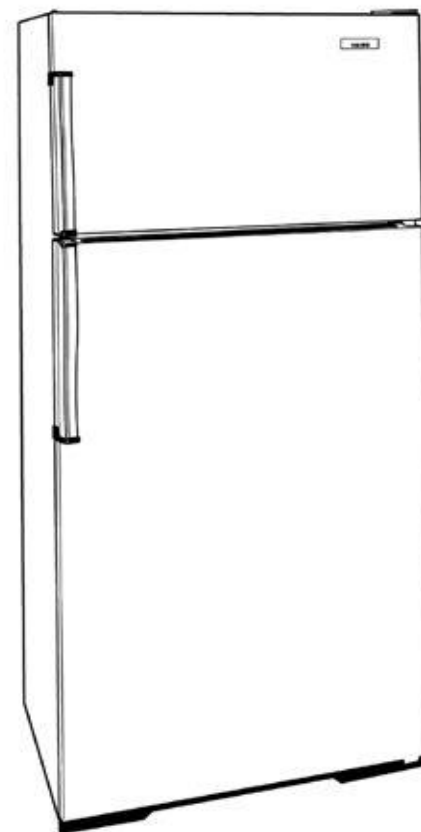
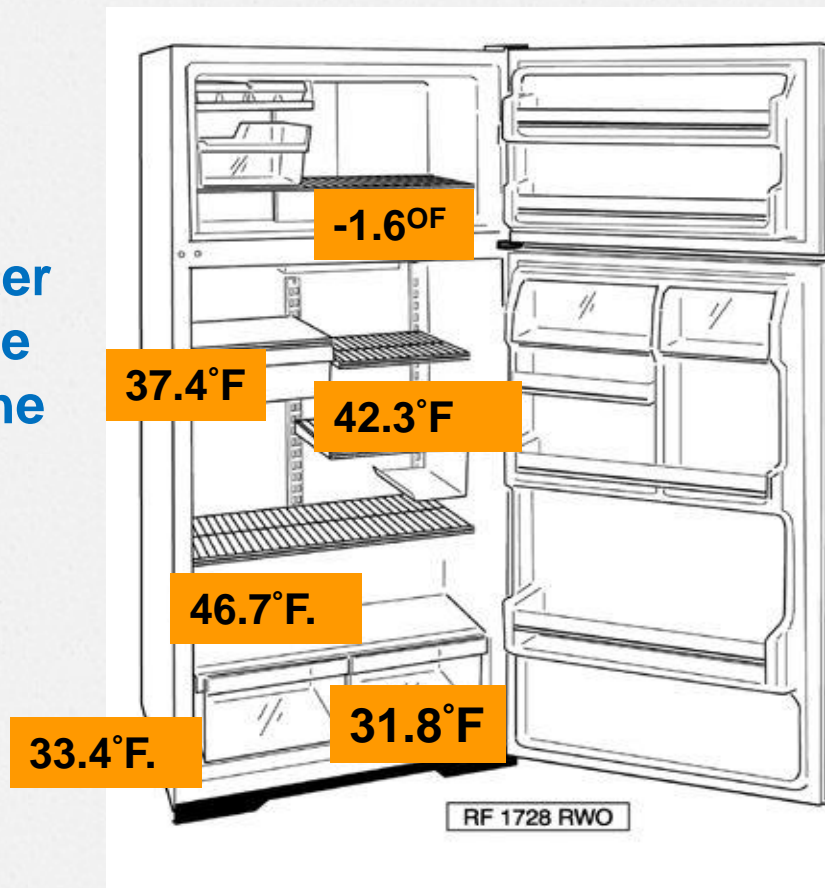
Thermometer Probe Placement

- Thermometer probe placement within the unit is just as important as thermometer selection.
- The thermometer should be in proximity to the vaccines being stored.
- Thermometers should not be placed in the doors, near or against the walls, close to vents, or on the floor of the unit.
 - According to a 2009 NIST study, thermometers “attached to walls or hanging in the air recorded dramatic temperature spikes followed by a significant drop well below the 2°C limit.”



Temperatures vary within one unit

Place
thermometer
probe in the
center of the
unit.





How to Buy a Vaccine Thermometer

1. Begin your online search
 - o Narrow search by including key terms such as “High accuracy vaccine thermometers”, “ $\pm 0.5^\circ\text{C}$ accuracy vaccine thermometer”



[Cole-Parmer Remote-Monitoring Thermocouple Thermometer \(Deg. C\)](#)

\$28.00 from Cole-Parmer

Ultra-thin cable lets you measure within doored equipment. For use in remote measurement applications. I



[Control Company Traceable High Accuracy Refrigerator Digital ...](#)

\$109.92 from Nova-Tech International 1 seller review

"Control Company Min/Max Traceable High Accuracy Refrigerator Digital Alarm Thermometer with Two



[Vaccine Thermometer, 5mL](#)

\$77.90 from Devine Medical

Accurately monitor temperatures inzers, water baths, heating blocks, incubators, and refrigerators with th



[Control Company Traceable High Accuracy Refrigerator Digital ...](#)

\$97.78 from Nova-Tech International 1 seller review

"Control Company Min/Max Traceable High Accuracy Refrigerator Digital Alarm Thermometer with one v



[Alarm Thermometer - 1 Probe](#)

\$79.10 from Devine Medical

Alarm Thermometer - 1 Probe High accuracy indicators are perfect for monitoring temperatures in refrige



[Tip Temp COCSEN012 Wireless Remote Thermometer](#)

\$110.95 from HomeTech Solutions ★★★★★ 412 seller reviews

Read temperatures 100 feet away: Module transmits on a radio frequency of 433 MHz, penetrating walls, v

Do an online search

- o Do not base your order on just an image!
- o Read product specification carefully
 - o Look for thermometers with a digital display of **current, minimum, and maximum temperatures**
 - o Check that the digital **display can be attached** to outside of the vaccine storage unit
 - o Check specifications for **accuracy of $\pm 1^{\circ}\text{F}$ ($\pm 0.5^{\circ}\text{C}$) or better ($\pm 0.3^{\circ}\text{C}$, 0.1°C)**
 - o Check specifications for a temperature probe in a **glycol-encased (or similar buffer solution*)** in a bottle
 - o Check specifications for a **visual or audible alarm** for out-of-range temperatures
 - o Check that the thermometer will have a **certificate of calibration**
<http://eziz.org/assets/docs/IMM-1119.pdf>



Are These Thermometers OK?



It depends....Check specifications!

Description

Specifications

More Info

Accessories

Protect your valuable refrigerated and frozen products with the PharmAlarm 1 Digital Alarm Thermometer. It monitors critical temperatures with audible and visual alarms. Alarm LED stays illuminated even if system returns to normal conditions.

Select ambient monitoring with an internal temperature sensor, or display temperatures via an external glass-bead filled temperature vial. The PharmAlarm 1 measures accurately from -50 to 70°C (-58 to 158°F). Each unit features a large digit display for ease in reading current temperature and a push-button backlight. Rest the PharmAlarm 1 on a shelf with a convenient kickstand or attach to the side of fridge/freezer with magnetic rear mounts.

Each PharmAlarm 1 ships with one external temperature sensor housed in a vial of glass beads that more accurately measures biopharm stored chilled products. Also included is a 3-point NIST-Traceable calibration certificate with test data at -20, 25, and 50°C.

Specifications

Product Type	Digital Indicator
Min temperature (° C)	-50
Min temperature (° F)	-58
Max temperature (° F)	158
Dimensions (" W)	3.875
Dimensions (" H)	4.375
Max temperature (° C)	70
Alarm	Yes
Dimensions (" D)	0.875
Accuracy (° F)	±1°
Accuracy (° C)	±1°
Display	LCD, triple display, 1.
Probe dimensions	10-ft cable submerse

Description

Specifications

More Info

Accessories

Internal Range	14 to 122°F (-10 to 50°C)
External Range	-58 to 158°F (-50 to 70°C)
Accuracy	±1°F (±0.5°C) between -4 to 122°F (-20 to 50°C), otherwise ±1.8°F (±1°C)
Resolution	0.1°
Display	0.8 H x 1.9 W inches (21 H x 48 W mm)
Alarms	High and low alarms settable in 1.8°F / 1.0°C increments
Battery	3 volt, CR2032 or equivalent x 1 piece (included), 10,000 hours
Response	10 seconds
Probe Cord Length	39.4 L inches (1 L m)
Dimensions	2 H x 2.9 W x 0.7 D inches (52 H x 73 W x 18 D mm)
Calibration	NIST-Traceable certificate included, 3-point (-20, 25 and 50°C)

When in doubt... ask!

- Contact the vendor directly for an explanation of the thermometer features and functions, or if you are unclear about specifications or acronyms listed in sales materials, such as buffering media, GRAS (Generally Regarded As Safe) solution.

The screenshot shows the Cole-Parmer website. At the top right, there is a navigation bar with links for 'Register', 'Login', and 'My Account', and a phone number 'CALL US (866) 433-6682'. Below this is a search bar and a shopping cart icon showing '0 items'. The main navigation bar includes 'Products', 'Chemicals', 'Information', and 'Contact Us'. The breadcrumb trail reads: 'Supply Products > Thermometers, Temperature Meters & Controllers > Digital Traceable Thermometers >'. The product page displays a digital thermometer with a screen showing '32.59', '-10.39', and '-40.68'. The product title is '4538 Control Company Min/Max Traceable® High Accuracy Refrigerator Digital Alarm Thermometer with one vaccine bottle probe, -58 to 158°F / -50 to 70°C with a NIST Traceable® Calibration Certificate'. On the left side, there is a sidebar with a list of categories: 'Order Status', 'Order Change', 'Order Cancellation', 'Return/Exchange', 'Product Question', 'Product Availability', 'Shipping Question', 'Website Issue', 'Suggestions & Feedback', 'Donation Request', 'Press Inquiry', 'RFQ', 'Price Match', and 'Deal Notification'. The 'Product Question' category is selected. Below the list is a form to 'Ask an Expert' with fields for 'Email Address', 'Name', 'Message', and 'Attach a file'. On the right side of the sidebar, there is a 'Call Us' section with a toll-free number '1-800-323-4340' and a 'Live Chat' link. The main content area on the right shows the 'United States' location, the phone number '1-800-323-4340', and a 'Live Chat' link. Below this is a 'Search' button and a 'Shop All Products' button. The footer includes a 'View Product List' link, a 'Home' link, and a 'Share' button with social media icons.



Become Familiar with the Thermometer

Remember these important steps:

- o Practice and test your new thermometer to become familiar with it BEFORE you place it in the vaccine storage unit to measure temperatures
 1. Test alarm settings to make sure they work
 2. Practice resetting temperature readings
 3. Train and verify competency of thermometer use among all staff responsible for temperature monitoring

**“DON'T PRACTICE
UNTIL YOU GET IT
RIGHT.**

**PRACTICE
UNTIL YOU CAN'T
GET IT WRONG.”**


Thermometer Calibration

- The word "calibrate" is often misunderstood to mean making some kind of adjustment to a thermometer for accuracy.
- While adjustments are sometimes needed, "calibrating" a thermometer simply means testing its accuracy against a verifiable standard.
 - If the thermometer is within the accuracy specification listed by the manufacturer or quality control agency, it should not be adjusted
 - Accuracy of a thermometer is its ability to measure temperature correctly without error.
- A thermometer must be within $\pm 1^{\circ}\text{F}$ ($\pm 0.5^{\circ}\text{C}$) of the actual temperature to be considered an accurate device.

Thermometer Calibration & Certification

- All thermometers (primary and back-up) must be calibrated annually (or every other year when the manufacturer recommends calibration done in a period that is longer than two years), and have a valid Certificate of Traceability and Calibration Testing, also known as a Certification of Calibration.
- A valid Certification of Calibration must be kept on file according to recordkeeping requirements and be readily available for review during VFC visits.
- Calibration should be conducted by an accredited laboratory.
- Thermometer no longer accurate within $\pm 1^{\circ}\text{F}$ ($\pm 0.5^{\circ}\text{C}$) as indicated in calibration measurement results must be replaced.

When sending your thermometers for calibration make sure to share items in the Calibration checklist with the calibration lab!






Checklist for Thermometer Certificate of Traceability and Calibration



A Certificate of Traceability and Calibration Testing (also known as a Report of Calibration) must include key pieces of information. Information required on the certificate depends on whether the laboratory performing calibration testing is an accredited or non-accredited laboratory.


Before sending your thermometer(s) for calibration, check with the calibration company to verify required information will be included on your certificate.

Accredited Laboratory

If an accredited laboratory is performing calibration testing, one of these logos will be on the certificate of calibration:



This logo may appear on the certificate. It represents a group of accreditation organizations such as the ones whose logos appear above.

In addition, the following information must be included on the certificate:

- ☐ Name and address of laboratory conducting the test
- ☐ Name of device (optional)
- ☐ Model number (enables product identification)
- ☐ Serial number (enables product identification)
- ☐ Date of calibration (Report or Issue Date)
- ☐ Measurement results for the device
 - Instrument pass or in tolerance testing result
 - Documented uncertainty [must be within $\pm 1^{\circ}\text{F}$ ($\pm 0.5^{\circ}\text{C}$)]

Non-accredited Laboratory

If a non-accredited laboratory is performing calibration testing, the following information must be included on the certificate:

- ☐ Statement that calibration testing conforms to ISO IEC 17025 standards
- ☐ Name and address of laboratory conducting the test
- ☐ Name of device (optional)
- ☐ Model number (enables product identification)
- ☐ Serial number (enables product identification)
- ☐ Date of calibration (report or issue date)
- ☐ Measurement results for the device
 - Instrument pass or in tolerance testing result
 - Documented uncertainty [must be within $\pm 1^{\circ}\text{F}$ ($\pm 0.5^{\circ}\text{C}$)]

eziz.org
IP04-1119 (12/13)

Accredited
Laboratory



Calibration
Certificate No. 1750.01

Calibration complies with ISO/IEC
17025, ANSI/NCSL Z540-1, and 9001



Cert. No.: 4227-5559302

Traceable® Certificate of Calibration for R thermometer identification

Instrument Identification:

Model: 4227 S/N: 130736898 Manufacturer: Control Company

Standards/Equipment:

Description	Serial Number	Due Date	NIST Traceable Ref.
Temperature Calibration Bath TC-179	A45240		
Thermistor Module	A17118	2/13/14	1000332071
Temperature Probe	128	2/20/14	6-B48Z9-30-1
Temperature Calibration Bath TC-231	A79341		
Thermistor Module	A17118	2/13/14	1000332071
Temperature Probe	3039	2/20/14	6-B48Z9-1-1

Calibration date and
next date due

Certificate Information:

Technician: 68 Process: CAL-03 Cal Date: 12/04/13 Cal Due: 12/04/15
Test Conditions: 24.0°C 0 %RH 1009 mBar

Calibration Data: (New)

Calibration Data

Unit(s)	Nominal	As Left	In Tol	Min	Max	±U	TUR
°C Probe	N.A.	0.000	Y	-0.5	0.5	0.100	>4:1
°C Probe	N.A.	50.000	Y	49.5	50.5	0.058	>4:1

Accuracy

This instrument was calibrated using instruments traceable to National Institute of Standards and Technology

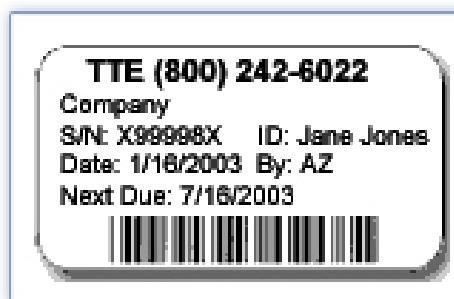
A Test Uncertainty Ratio of at least 4:1 is maintained unless otherwise stated and is calculated using the expanded measurement uncertainty. Uncertainty of test and is calculated with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty. Results are based on test results falling within specified limits with no reduction by the uncertainty of the measurement. Results contained

Accredited Laboratory Name

CONTROL COMPANY 4455 Rex Road Friendswood, TX 77546 USA
Phone 281 482-1714 Fax 281 482-9448 service@control3.com www.control3.com

Control Company is an ISO 17025 Calibration Laboratory Accredited by (A2LA) American Association for Laboratory Accreditation, Certificate No. 1750.01
Control Company is ISO 9001 Quality Certified by (DNV) Det Norske Veritas, Certificate No. CERT-01805-AQ-HOU.
International Laboratory Accreditation Cooperation (ILAC) - Multilateral Recognition Arrangement (MRA)

Unacceptable Proof of Calibration



Calibration Services

- o Thermometer calibration must be done by a laboratory with accreditation from an International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) signatory body.
- o Follow links for listings of accredited laboratories:
 - o The American Association for Laboratory Accreditation (A2LA)
 - o <http://www.a2la.org/dirsearchnew/newsearch.cfm>
 - o Laboratory Accreditation Bureau (L-A-B)
 - o <http://www.l-a-b.com/content/directory-accredited-labs>
 - o ANSI-ASQ National Accreditation Board (ACLASS)
 - o <http://www.aiclasscorp.com/search-accredited-companies.aspx>
 - o International Accreditation Service (IAS)
 - o http://www.iasonline.org/Calibration_Laboratories/CL.html
 - o Perry Johnson Laboratory Accreditation, Inc.(PJLA)
 - o <http://www.pjlabs.com/search-accredited-labs>

Temperature Monitoring

- Temperatures for each unit (current, MIN & MAX) must be read and documented twice daily
 - logs must be maintained for 3 yrs. and be readily available for review (during site visits or as requested by VFC during random temp log reviews).
 - Min / max temperatures must be cleared after each reading.
 - Temperatures must be recorded on VFC-provided temperature logs, even if using a continuous temperature-recording device or digital data logger.

Avoid patient recalls by accurately recording temperatures twice a day.

VFC PIN _____

Record the Time and your Initials.

- Record CURRENT, MIN, and MAX temperatures.
- Circle if TOO WARM or TOO COLD. Refer to ranges.

Follow steps for one of the three ranges.

1. Press MEMORY CLEAR/RESET button.
2. Post "Do Not Use Vaccine" sign.
3. Alert your supervisor.
4. **At any time – Call VFC Call Center.**
5. Document on Step 4 (next page).

When Log Is Complete Sign and Acknowledge. File and keep log for 3 years.

I certify that the temperatures recorded on this log are correct. All temperatures that were TOO WARM or TOO COLD have been circled and corrective action was taken and documented. I understand that falsifying logs will result in vaccines being unusable, patients being revaccinated, and provider possibly replacing vaccines.

Staff Names and Initials: _____

On-site Supervisor's Name & Signature: _____ Date: _____

California Vaccines for Children Program (VFC) 1-877-243-8832

EZIZ.org IMM-1125 Page 1 (12/14)

VFC PIN _____

Document actions for temperatures that are TOO WARM or TOO COLD.

TOO COLD

34.9°
34°
33°
32°
31°
30°
29°
28° & colder

Fill out this section if you recorded a MAX that was TOO WARM.

[illegible]

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www.EZIZ.org IMM-1125 Page 2 (12/14)

2015 Temperature Logs

Implement immediately

F° Refrigerator Temperature Log

Four Steps to Protect Your Vaccines

Avoid patient recalls by accurately recording temperatures twice a day.

Month/Year (Days 1-15) _____

Refrigerator Location _____

Refrigerator ID _____

VFC PIN _____

Step 1 Record the Time and your Initials.			Step 2 • Record CURRENT, MIN, and MAX temperatures. • Circle if TOO WARM or TOO COLD. Refer to ranges.			Step 3 Follow steps for one of the three ranges.	
Day of Month	Time	Initials	CURRENT	MIN	MAX		
Example	8:00 a.m. 4:00 p.m.	NN TP	36.4 46.7	31.0 39.2	40.2 48.3	TOO WARM!	MAX TOO WARM?
1	a.m. p.m.					54° & warmer	1. Press MEMORY CLEAR/RESET button. 2. Post "Do Not Use Vaccine" sign. 3. Alert your supervisor. 4. A.M. – Call VFC Call Center, or P.M. – Wait 1 hour: • If CURRENT is still TOO WARM, call VFC Call Center. • If CURRENT is OK, no need to call VFC Call Center. 5. Document on Step 4 (next page).
2	a.m. p.m.					53°	OK CURRENT, MIN, and MAX are all OK. 1. Press MEMORY CLEAR/RESET button. Done. Skip Step 4 (next page).
3	a.m. p.m.					52°	
4	a.m. p.m.					51°	
5	a.m. p.m.					50°	
6	a.m. p.m.					49°	
7	a.m. p.m.					48°	TOO COLD! MIN TOO COLD? 1. Press MEMORY CLEAR/RESET button. 2. Post "Do Not Use Vaccine" sign. 3. Alert your supervisor. 4. At any time – Call VFC Call Center. 5. Document on Step 4 (next page).
8	a.m. p.m.					47°	
9	a.m. p.m.					46.1°	
10	a.m. p.m.					46.0°	
11	a.m. p.m.					45°	
12	a.m. p.m.					44°	CURRENT, MIN, and MAX are all OK. 1. Press MEMORY CLEAR/RESET button. Done. Skip Step 4 (next page).
13	a.m. p.m.					43°	
14	a.m. p.m.					42°	
15	a.m. p.m.					41°	
	a.m. p.m.					40°	

When Log Is Complete Sign and Acknowledge. File and keep log for 3 years.

I certify that the temperatures recorded on this log are correct. All temperatures that were TOO WARM or TOO COLD have been circled and corrective action was taken and documented. I understand that falsifying logs will result in vaccines being unusable, patients being revaccinated, and provider possibly replacing vaccines.

Staff Names and Initials: _____

On-site Supervisor's Name & Signature: _____ Date: _____

California Vaccines for Children Program VFC Call Center: 1-877-243-8832 EZIZ.org IMM-1125 Page 1 (12/14)

F° Freezer Temperature Log

Four Steps to Protect Your Vaccines

Avoid patient recalls by accurately recording temperatures twice a day.

Month/Year (Days 1-15) _____

Freezer Location _____

Freezer ID _____

VFC PIN _____

Step 1 Record the Time and your Initials.			Step 2 • Record CURRENT, MIN, and MAX temperatures. • Circle temperatures if TOO WARM. Refer to ranges.			Step 3 Follow steps for one of the two ranges.	
Day of Month	Time	Initials	CURRENT	MIN	MAX		
Example	8:00 a.m. 4:00 p.m.	NN TP	2.8 -15.0	-10.5 -20.4	6.3 -10.8	TOO WARM!	MAX TOO WARM?
1	a.m. p.m.					18° & warmer	1. Press MEMORY CLEAR/RESET button. 2. Post "Do Not Use Vaccine" sign. 3. Alert your supervisor. 4. A.M. – Call VFC Call Center, or P.M. – Wait 1 hour: • If CURRENT is still TOO WARM, call VFC Call Center. • If CURRENT is OK, no need to call VFC Call Center. 5. Document on Step 4 (next page).
2	a.m. p.m.					17°	CURRENT, MIN, and MAX are all OK. 1. Press MEMORY CLEAR/RESET button. Done. Skip Step 4 (next page).
3	a.m. p.m.					16°	
4	a.m. p.m.					15°	
5	a.m. p.m.					14°	
6	a.m. p.m.					13°	
7	a.m. p.m.					12°	OK CURRENT, MIN, and MAX are all OK. 1. Press MEMORY CLEAR/RESET button. Done. Skip Step 4 (next page).
8	a.m. p.m.					11°	
9	a.m. p.m.					10°	
10	a.m. p.m.					9°	
11	a.m. p.m.					8°	
12	a.m. p.m.					7°	TOO COLD! MIN TOO COLD? 1. Press MEMORY CLEAR/RESET button. 2. Post "Do Not Use Vaccine" sign. 3. Alert your supervisor. 4. At any time – Call VFC Call Center. 5. Document on Step 4 (next page).
13	a.m. p.m.					6°	
14	a.m. p.m.					5.1°	
15	a.m. p.m.					5.0°	
	a.m. p.m.					4°	

When Log Is Complete Sign and Acknowledge. File and keep log for 3 years.

I certify that the temperatures recorded on this log are correct. All temperatures that were TOO WARM have been circled and corrective action was taken and documented. I understand that falsifying logs will result in vaccines being unusable, patients being revaccinated, and provider possibly replacing vaccines.

Staff Names and Initials: _____

On-site Supervisor's Name & Signature: _____ Date: _____

California Vaccines for Children Program VFC Call Center: 1-877-243-8832 EZIZ.org IMM-1125 Page 1 (12/14)

Refrigerator Action Guide – When To Call VFC (°F)

Action steps are different because vaccines respond differently to WARM and COLD temperatures and the amount of time at these temperatures. Post this guide on the refrigerator to help you take the correct actions.

VACCINES for CHILDREN
CALIFORNIA

VFC



MIN TOO COLD

28° & colder 29° 30° 31° 32° 33° 34° 34.9°

1. Press MEMORY CLEAR/RESET button(s) after recording temperatures.
2. Post "Do Not Use Vaccine" sign.
3. Alert your supervisor.

Call VFC Call Center!
1-877-243-8832

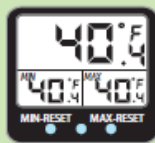
Press MEMORY CLEAR/RESET button(s).

Document all actions taken.

CURRENT, MIN, and MAX are all OK.

35.0° 36° 37° 38° 39° 40° 41° 42° 43° 44° 45° 46.0°

1. Press MEMORY CLEAR/RESET button(s). Done. No need to call VFC.



Make sure that MIN and MAX show on the display and not alarm settings (LO and HI).

MAX TOO WARM

46.1° 47° 48° 49° 50° 51° 52° 53° 54° & warmer

1. Press MEMORY CLEAR/RESET button(s) after recording temperatures.
2. Post "Do Not Use Vaccine" sign.
3. Alert your supervisor.

A.M.
recording

P.M.
recording

Call VFC
Call Center!
1-877-243-8832

Wait 1 hour
& check
temperatures again.

CURRENT
TOO WARM

CURRENT
OK

Call VFC
Call Center!
1-877-243-8832

No need
to call VFC
(unless this
happens daily).

Press MEMORY CLEAR/RESET button(s).

Document all actions taken.

If you are not sure if there is a problem, call:

California Vaccines for Children Program (VFC) 1-877-243-8832

Storage and Handling Incidents

- If a cold chain failure is suspected (temperatures outside the recommended temperature range), providers must:
 - Store vaccine under correct temperature storage conditions.
 - Label the vaccine “DO NOT USE” so the vaccine is not administered until a response indicating the vaccine is acceptable for use has been received.
 - Notify the VFC program immediately after discovery of the incident.
 - Follow the guidance on documenting and reporting the incident to the vaccine manufacturers for a resolution.



Routine and Emergency Management Plans

- o VFC Requirements:
 - o Maintain updated plans
 - o Reviewed annually & document review
 - o Update as needed

Routine and Emergency Management Plans

New!

VFC Providers must develop and maintain a Routine Vaccine Management Plan and an Emergency Vaccine Management Plan. Plans should include practice-specific guidelines, protocols, and contact information. Plans must be updated whenever VFC Program guidelines change and when staff with designated vaccine management responsibilities change.

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Emergency Vaccine Management Plan

WORKSHEET FOR EMERGENCY CONTACTS

KEEP NEAR VACCINE STORAGE UNIT(S)

The California VFC Program requires each practice to develop and maintain an Emergency Vaccine Management Plan and a Routine Vaccine Management Plan. Plans should include practice-specific guidelines, protocols, and relevant contact information. Plans must be updated and reviewed whenever VFC Program guidelines change and when staff with designated vaccine management responsibilities change.

This Emergency Vaccine Management Plan outlines actions staff should take in the event of an emergency that might affect vaccine viability. Examples include unit malfunction/mechanical failure, power outage, natural disaster, or human error.

STAFF ROLES & CONTACT INFORMATION

OFFICE / CLINIC NAME	VFC PIN NUMBER
ADDRESS:	

In an emergency, contact the following people in the order listed:

Role/Responsibility	Name	Phone Number	Alt Phone Number	Email Address
1.				
2.				
3.				
4.				

USEFUL EMERGENCY NUMBERS

Service	Name	Phone Number	Alt Phone Number	Email Address
VFC Field Rep				
VFC Customer Service Center		1-877-243-8832		
Utility Company				
Building Maintenance				
Building Alarm Company				
Refrigerator/Freezer Alarm Company				
Refrigerator/Freezer Repair				
Generator Repair and Maintenance				
Point of contact for Vaccine Transport				
Other				

Does the clinic have a generator? If so, where is it? _____

If your clinic does not have a generator, and/or your vaccine storage unit fails, it might be necessary to transport vaccine to alternate storage locations.

Alternate Vaccine Storage Location	Address	Phone Number	Alt Phone Number	Email Address

Location of emergency packing supplies: _____

Emergency Vaccine Management Plan

RELOCATING VACCINE

If a power outage is long-term, is not expected to be restored by the end of the day, or vaccine storage units have reached out-of-range temperatures, prepare to relocate vaccines to the alternate storage location as feasible.

Before transporting vaccines

- Review job aids (<http://www.eziz.org/assets/docs/IMM-983.pdf> and <http://eziz.org/assets/docs/IMM-1130.pdf>)
- Contact the alternate storage facility to verify they can accept the vaccines
- Notify the VFC Program.

If transport or relocation is not feasible, e.g. alternate location not available or unsafe travel conditions:

- Keep units closed and document the temperatures (CURRENT, MIN, MAX).
- Contact the VFC Program.

Packaging and Transporting Vaccines

- Complete the Refrigerated Vaccine Transport Log and/or the Frozen Vaccine Transport Log (<http://eziz.org/assets/docs/IMM-1132.pdf> and <http://eziz.org/assets/docs/IMM-1116.pdf>).
- Prepare cooler(s) following VFC guidelines job aids (<http://www.eziz.org/assets/docs/IMM-983.pdf> and <http://eziz.org/assets/docs/IMM-1130.pdf>). Notify the key staff listed on this Emergency Plan as appropriate.
- Pack vaccine according to VFC guidelines.
 - Use frozen cold packs for frozen vaccines; never use dry ice.
 - Use conditioned frozen packs for refrigerated vaccines. Placing refrigerated vaccine directly on frozen packs and packaging it without sufficient insulation may freeze and therefore damage vaccine. If clinic does not have time to condition frozen packs, refrigerated cold packs or cold water bottles may be used.
- Package and prepare diluent.
 - MMR, Varicella and MMR-V diluent can be stored at room temperature or in the refrigerator.

- Diluents stored in the refrigerator should be transported with refrigerated vaccines.
- Diluents stored at room temperature should be transported at room temperature.
- Diluents packaged with their vaccine should be transported with the vaccine
- Upon arrival at the alternate vaccine storage location, document total vaccine transport time, the temperatures (CURRENT, MIN, and MAX) in the transport cooler(s) and the alternate storage unit(s).

AFTER POWER IS RESTORED

- Verify storage units are functioning properly before attempting to move any vaccine
- Follow the same transportation procedures and transfer vaccine back to its original storage unit.
- Vaccine kept at the proper temperature during the power outage, whether transported or not, may be used.
- For any vaccine not stored at the proper temperature:
 - Segregate it in the storage unit.
 - Mark it "DO NOT USE"
 - Contact the VFC Program; be prepared to provide timeframes and temperature information.
- Never return vaccine to the vaccine distributor without VFC Program authorization.



EZIZ Lessons Requirement

Lessons	Vaccine Coordinator	Back-up Vaccine Coordinator	Provider of Record	Provider of Record Designee
VFC Program Requirements*	✓	✓	✓	✓
Storing Vaccines*	✓	✓	✓	✓
How to Record Refrigerator Temperatures	✓	✓	✓	✓
How to Record Freezer Temperatures	✓	✓	✓	✓
Conducting a Vaccine Inventory*	✓	✓	Recommended	Recommended

* **Test Out Option Available**



EZIZ TRAINING


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A one-stop shop for immunization training and resources.

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Don't forget
to download helpful
job aids for all the lessons



**EZIZ Training
Technical
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Sign up to receive
EZIZ news and
VFC letters
via email



Learning History

California VFC Recertification Requirement 2015

The Lessons below must be completed for 2015 recertification. Providers cannot recertify until the training has been completed.

† required for [Vaccine Coordinator](#) and [Backup](#)

‡ required for [Provider of Record](#) and [Designee](#)

Restart lessons if taken before 2015. You may skip lessons if you [meet these requirements](#).

When done, log in to [MyVFCVaccines](#) to get credit.

Lesson	Pre-lesson Check	Instruction	Post-lesson Check	Certificate
Storing Vaccines † ‡	✓	Review (Optional)	Test-Out 01/07/2015	Print
How to Record Refrigerator Temperatures (PDF) † ‡	N/A	Begin F° / C°	N/A	
How to Record Freezer Temperatures (PDF) † ‡	N/A	Begin F° / C°	N/A	
Conducting a Vaccine Inventory †	✓	Review (Optional)	Test-Out 01/07/2015	Print
VFC Program Requirements † ‡	✓	Continue		
Preparing Vaccines	Begin			
Administering Vaccines	Begin			

My Account

Hi csadorra,

- ▶ [Edit Profile](#)
- ▶ [Reset individual lessons](#)
- ▶ [Automatically reset all lessons for recertification \[NEW\]](#)
- ▶ [Logout](#)

To skip the lesson (test-out), you must have completed the required lesson in 2014 with a passing score, and click the RESET button to restart the required lesson for 2015, and pass the pre-lesson check.

More Demonstration Videos:

- [Pre-filled Syringes](#)
- [Nasal Vaccines](#)
- [Oral Vaccines](#)
- [Educating Parents](#)
- [Documentation](#)
- [Safety](#)

Technical Support

For answers to the most common problems or to contact EZIZ Training technical support, go to [EZIZ Training Frequently Asked Questions](#).

Tell us what





VFC RECERTIFICATION

Vaccines for Children (VFC) Program Provider eRecertification Form



The VFC-eligible patient population has been pre-filled for your practice based on usage data reported by your practice. Review and confirm or modify the patient population estimates for your practice.

Patient Estimates

ESTIMATED NUMBER OF VFC AND NON-VFC ELIGIBLE PATIENTS 0-18 YEARS WHO WILL RECEIVE IMMUNIZATION IN YOUR PRACTICE DURING A 12-MONTH PERIOD (JANUARY-DECEMBER 2015).
ENTER -0- IF THERE ARE NO PATIENTS IN THE CLINIC WITHIN ANY OF THE LISTED CATEGORIES.

(Note: these numbers are calculated based on your VFC vaccine usage history. Revise the numbers if necessary.)

Category	< 1 yr	Ages 1-6 yrs	Ages 7-18 yrs	TOTALS
	Number of patients *	Number of patients *	Number of patients *	
TOTAL VFC Eligible	0	0	0	0
1. CHDP/Medi-Cal Eligible	0	0	0	0
2. Uninsured	0	0	0	0
3. Am. Indian/Alaska Native	0	0	0	0
4. Underinsured (FQHCs and RHCs only)	Underinsured children may be immunized with VFC-supplied vaccines ONLY at FQHCs and RHCs. This option does not apply to your provider type.			
Non-VFC Eligible				0
ALL CHILDREN				0

% of patients 0-18 yrs of age in your practice who are vfc-eligible: NaN

What data source did you use to confirm/modify your patient population estimates? --

In the last year, has the number of children you immunize? --

Check this box ONLY if you don't have any non-VFC eligible patients ☐

I certify that my practice will order and provide all age-appropriate ACIP-recommended vaccines to my VFC-eligible patient populations. ☐

Below are the age-appropriate ACIP-recommended vaccines that I will provide based on my patient estimates.

- If I have patients ages 1 year or younger, I will order and provide the following vaccines: DTaP, Hep B, Hib, Influenza, Polio, Pneumococcal Conjugate, Rotavirus.
- If I have patients ages 1-6 years, I will order and provide the following vaccines: DTaP, Hep A, Hep B, Hib, Influenza, Polio, Pneumococcal Conjugate, MMR, Varicella.
- If I have patients ages 7-18 years, I will order and provide the following vaccines: HPV, Influenza, Meningococcal Conjugate, Tdap

☐ I certify that I have reviewed the provided patient estimates. I have edited or confirmed the estimates and they are a true reflection of my pediatric patient population according to the data source selected

* = required field i = more information

Next Step >>



EZIZ: One EZ Stop for IZ Resources!



Google™ Custom Search

A one-stop shop for immunization training and resources.

Home

EZIZ Training

VFC Program

Storage & Handling

Resources

Contact VFC

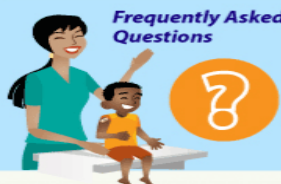
Phone: 1-877-243-8832
Business hours: 8:30-5
Fax: 1-877-329-9832

- Find a VFC field representative in your area
- Find other VFC provider offices in your area
- Send us your comments at eziz@cdph.ca.gov

Sign up to receive
EZIZ news and
VFC letters
via email!



Frequently Asked Questions



California VFC Program



Overview

Find out how to become a California VFC provider.



EZIZ Training

Interactive lessons, job aids, video demonstrations, and other resources.



Storage and Handling

Learn about VFC equipment requirements and how to safely store vaccines.



VFC Online Ordering

Place a vaccine order. Order supplemental flu vaccine. Submit a Transfer/Return.



VFC Forms

Download forms for enrolling, vaccine ordering and more.

Hot Tips

Download ACIP's 2012 Childhood, Adolescent, and Adult Immunization Schedules

Vaccine Fact Sheets

Download these quick, easy reference documents that provide condensed vaccine information regarding: routine schedules, minimum intervals, approved for use age ranges, administration routes, billing codes, storage, ACIP recommendations and more.

Popular Links

- Printable Materials For Your Practice
- Pertussis Materials
- Flu and Respiratory Disease Prevention
- Immunization Schedule & Recommendations
- Vaccine Information Statements (VIS)
- CAIR Registry
- Disease Surveillance
- Laws and Regulations
- Local Health Departments

VFC Memos

Vaccine Order Status

Other News

- Influenza Update 2012/03/14
- Vaccine Tips: CDC's 1st Online National Immunization Conference March 2012
- Recommended ACIP Childhood and Adolescent Immunizations Schedules, 2012; Reminder, Ongoing Pertussis (Tdap) School Requirements for 7th Grade Entry; Vaccine Ordering 2012/03/02
- Vaccine Tips: Preteen Vaccine Week February 2012
- Vaccine Tips: Features of Online Ordering and VFC Office Closure Notice January 2012
- Quadrivalent HPV Vaccine (HPV4) Now Routinely Recommended for Males 2012/01/23
- REMINDER: VFC Recertification due January 31, 2012 2012/01/20
- Influenza Supply Update 2012/01/20
Also see:
MedImmune's FluMist® 2011-2012 replacement program
- Tetanus Toxoid, Reduced Diphtheria Toxoid, and Acellular Pertussis Vaccine 2012/01/05
- Introducing VFC's Online Ordering System and "MyVFCVaccines" 11/14/2011
Also see:
MyVFCVaccines How-to Guide
Introducing MyVFCVaccines Card
Vaccine Inventory Form



Flu Vaccines

- ◊ Continue giving return when expires
- ◊ Remove from unit as soon as it expires
- ◊ Return expired vaccine





New Vaccines

- Several new vaccines have been approved by the FDA.
- Need to be added to the VFC contract
- Will be available in California

Questions?

- Remember that the State Immunization Branch Field Staff and VFC Field Staff are here to help!
- Contact your area representative if you have any questions or need assistance